APPENDIX R

Traffic Impact Analysis Peer Review and Vehicle Miles Traveled Analysis



Memorandum

Date: May 2, 2023

To: Bharat Singh, Michael Schaller, Steve Monowitz, San Mateo County

From: Mike Hawkins, Nina Price, Fehr & Peers

Subject: Final TIA Peer Review and VMT Analysis

SF22-1162

This memorandum provides a peer review of the *Cypress Point Transportation Impact Analysis and Mitigation Plan* ("TIA"), Kittelson & Associates, July 2022, updated March 14, 2023. The Cypress Point Project ("Project") is in Moss Beach in unincorporated San Mateo County. The proposed Project includes 71 affordable housing units on an 11.02-acre parcel that is currently vacant. Access to the site would be provided by a driveway on Carlos Street, near the intersection with Sierra Street. The peer review is based on guidance from the County of San Mateo Traffic Impact Study Requirements ("TIS Requirements") and County input on local plans and policies.

Introduction

The purpose of this memorandum is to document Fehr & Peers' review of the TIA, which was requested by the County due to traffic and safety concerns associated with the project-related traffic impacts and mitigation measures and the TIA's consistency with local plans, including Connect the Coastside (CTC). Additionally, this memorandum includes analysis of the project VMT.

Fehr & Peers completed a draft peer review of the TIA on February 2, 2023 which was reviewed by the following stakeholders of the project:

- 1. San Mateo County Planning Department
- 2. Midpen Project Developers
- 3. SWCA Project Environmental Consultants
- 4. Kittelson & Associates Project Transportation Consultants

Kittelson & Associates subsequently updated the TIA based on the comments from the draft TIA Peer Review and the outcomes of discussions with the stakeholders. **Attachment A** documents the comments that were addressed in the most recent update of the TIA, or otherwise determined



unnecessary to incorporate from the draft TIA. Comments on the TIA contained in this memorandum have not yet been incorporated or discussed.

Previous Peer Review

A previous peer review of the TIA was conducted by Pang Engineers in 2019. Upon consultation with County staff, the Project developers, and the Project transportation consultants, it was determined that the comments did not warrant additional analysis nor did they need to be incorporated into the final TIA. The key suggestions from the previous peer review are summarized below for informational purposes only:

- Include traffic counts for a typical school day and summer day, use worst case for LOS calculations.
- Redo all LOS calculations with new counts, proper trip generation estimates, and accurate trip distribution.
- Further parking analysis to find 85th percentile values compared with County Code Requirements (current TIA reflects average and maximum values)
- Providing more parking than required conflicts with the interest to reduce traffic impacts.

Detailed TIA Assessment

The following sections provide a more detailed assessment of the items which may still be considered for incorporation into the TIA. A discussion of transportation related plans and policies is included in **Appendix A**. Additional comments for the Transportation Consultant are attached in **Appendix B** for consideration. A comparison of traffic counts collected in 2017 and 2022 are provided in **Appendix C**, and the raw traffic counts prepared by Quality Counts is provided in **Appendix D**.

Site Access and Circulation

There are plans for bicycle and pedestrian facilities on Highway 1 as described in **Appendix A**. Improvements to safety and connectivity for bicyclists and pedestrians will likely result in a higher volume of bicycle and pedestrian trips. There are several opportunities at the Project site to create higher visibility crossings to provide better visibility for pedestrians and bicyclists and encourage bicycling and walking as modes of transportation.

Fehr & Peers reviewed the Project site and developed a list of considerations to improve vehicle, bicycle, and pedestrian access and circulation. These considerations may be incorporated into a site plan review section of the TIA or may be used by the development team to refine their site design. A list of considerations is provided below:

 Driveway Location – The site driveway is aligned well with Carlos Street to provide a clear line of sight for vehicles approaching from both directions on Carlos Street; however, the



- adjacent property wall restricts drivers exiting the site driveway from seeing cars approaching from the left. Vehicles would need to scoot closer into the intersection to see oncoming vehicles. Suggest adding pavement markings and signage to alert drivers on Carlos Street of the intersection.
- Site Circulation Provide signage and pavement markings ahead of pedestrian crossings around site to alert drivers to yield to pedestrians. Recommend speed humps to maintain low vehicle speeds on site. Sidewalk around site looks quite narrow. Suggest widening sidewalks on site to accommodate both bicycles and pedestrians separate from the roadway with vehicles.
- Transit Design the Project site to connect with future facilities on Highway 1 for improved pedestrian safety and connectivity, especially on Highway 1 at Carlos Street and 16th Street for access to SamTrans Route 117 southbound stop, and from the site to Highway 1 at 14th Street for access to SamTrans Route 117 northbound stop.
- Pedestrians/Bicyclists Strengthen pedestrian connection between site and pedestrian and transit facilities. Connect sidewalks internal to site to bus stops on Highway 1 at 16th Street and at 14th Street. Provide signage on site to make drivers aware of bicyclists and pedestrians, especially at the pedestrian crossings throughout the parking areas. Add a discussion of the adequacy of proposed facilities to achieve the Complete Street Policy¹. Add a discussion of added bike trips/primary travel paths from new residential uses to nearby schools and shops as well as surrounding major bike routes for commuters. Add a discussion of any intersections where major bicycle activity levels are anticipated as a result of the project and needed off-site bicycle improvements to support these activity levels. Add a discussion of pedestrian travel paths from new residential uses to surrounding destinations.
- Emergency Vehicle Access Show truck turning templates for emergency vehicle circulation on site. Add text identifying the nearest fire station, route, and anticipated travel time to the project site.

Signal Warrant Analysis

Traffic signal warrant analysis was conducted for Study Intersection #2: Highway 1 & 16th Street and Study Intersection #6: Highway 1 & Vallemar Street/Etheldore Street. The TIA found impacts to traffic operations in the Cumulative with Project conditions at both intersections. The warrant analysis was conducted to test whether the traffic volumes warrant a traffic signal, that could potentially reduce the delay at the intersections in their existing traffic control. The TIA studied the appropriate time periods and concluded the warrant is not met for either intersection.

¹ County of San Mateo. 2013. *County of San Mateo General Plan Policies Chapter 12: Transportation Policies*. Available: https://www.smcgov.org/planning/general-plan-policies. For Complete Streets goals and objectives, see pages 12.2P, 12.5P, and 12.9P. Accessed December 5, 2022.



Fehr & Peers reviewed the traffic signal warrants worksheets in Appendix 10 of the TIA and reached the same conclusions that the traffic signal warrants are not met.

Parking

The requirements for vehicle parking presented in the TIA accurately reflect the zoning requirements for San Mateo County. Based on the County zoning regulations, the 71-unit development would require 127 vehicle parking spaces. The site plan provides 142 parking spaces, which exceeds the requirement by 15 spaces.

For bicycle parking spaces, the Project is providing eight short-term (outdoor) and 36 long-term (inside and secure) spaces. San Mateo County Zoning Regulations does not specify bicycle parking requirements for this region².

The TIA presented parking demand from the ITE 4th Edition Parking Demand Manual.

Table 5 presents parking demand estimated using two different parking generation methodologies contained within *ITE Parking Generation*, 5th Edition: Multi-Family Low-Rise Apartment, and Affordable Housing. The demand is quantified based on the number of dwelling units in the development.

Table 1. Parking Demand Comparison

ITE Edition	Units	Weekday					
		Fitted Curve Equation	Average Rate	Max Rate			
TIA Parking Demand – ITE 4 th Edition ¹	Dwelling Unit	63	87	138			
ITE 5th Edition – Multi-Family Low Rise ²	Dwelling Unit	79	86	108			
ITE 5th Edition – Affordable Housing³	Dwelling Unit	58	70	94			

Notes:

- 1. ITE Parking Demand, 4th Edition (Land Use #221 Low/Mid-Rise) Adjacent Street Traffic Peak Hour
- 2. ITE Parking Demand, 5th Edition (Land Use #220 Multi-Family Low-Rise) Adjacent Street Traffic Peak Hour
- 3. ITE Parking Demand, 5th Edition (Land Use #223 Affordable Housing) Adjacent Street Traffic Peak Hour Source: Fehr & Peers, 2022.

The parking demands estimated in the latest edition of the ITE manual are lower than those presented in the TIA. However, the parking supply exceeds both calculations for maximum

² County of San Mateo. 2022. *San Mateo County Zoning Regulations*. Available: https://www.smcgov.org/media/101461/download?inline=. Accessed December 5, 2022.



demand, which supports the TIA's statement that the site plan can support the parking demand for the development.

Fehr & Peers recommends the TIA include a comparison between the 4th Edition Parking Demand estimates with the estimates from latest edition of ITE (ITE 5th edition).

Transportation Demand Management (TDM)

The purpose of the Transportation Demand Management (TDM) program is to provide options to future residents to allow use of non-auto modes, strategies to encourage carpooling, biking, walking, and transit use, and site design features to promote the same. The proposed TDM Plan includes measures that are related to non-drive alone mode education, transit or ridesharing subsidies, bicycle amenities, and infrastructure improvements to support active transportation. The program is used as a mitigation for traffic operations impacts and sight distance and safety impacts.

The TDM program meets the requirements set forth by City/County Association of Governments of San Mateo County (C/CAG) for the project to include a series of measures that achieve a minimum trip reduction target of 25 percent based on the Project's type, size, and location. The Project's TDM Program achieves a total trip reduction of 26 percent of all the selected measures, and therefore meets C/CAG requirements.

It is recommended the TDM Measures are part of the project description to confirm the Project sponsor has agreed to these measures and that they will be implemented. At this time, this has not been confirmed. Per C/CAG, the Project sponsor may consider TDM Measure 4 for participation in Commute.org or Transportation Management Association (TMA) Equivalent. Three Peninsula Traffic Congestion Relief Alliance (Commute.org) shuttles provide weekday service through San Mateo County. Although no shuttles operate service near the Project site, Commute.org has a Bicycle to Work Rewards Program that rewards San Mateo County residents, workers, and students up to \$100 for logging bicycle commutes that begin or end in the County. Additionally, commuters who live and work in San Mateo County are eligible for the Guaranteed Ride Home program, in which Commute.org will cover the cost of a ride home, up to \$60 per trip with a maximum of four trips per calendar year, in case of illness or bicycle theft/breakage. These resources and rewards would help to encourage bicycling for commuting purposes.

Project VMT

The VMT analysis in the TIA is consistent with local guidance and the Governor's Office of Planning and Research (OPR) on CEQA VMT analysis. The TIA has documented the Project would represent a significant impact if the Project would result in more than 11.56 daily home-based Vehicle Miles Traveled (VMT) per capita by resident, which represents a 15 percent reduction from the baseline San Mateo County average of 13.60 home-based trip VMT per resident.



Fehr & Peers used the C/CAG VMT Estimation Tool to determine the residential VMT for the Project Transportation Analysis Zone (TAZ) is 23.6. Using the 2020 baseline year, the Bay Area Regional Average home-based VMT per resident is 14.6, and a 15 percent reduction from the baseline County average would result in a threshold of 12.41 home-based VMT per resident.

Considering the context of the development in Moss Beach, it is also relevant to compare the Project VMT to Coastal TAZs in San Mateo County (from Pacifica to Half Moon Bay). Fehr & Peers used the C/CAG VMT estimation tool to aggregate Coastal TAZ VMT and found that the average VMT for Coastal TAZs, weighted by population, is 19.0 and a 15 percent reduction from the Coastal TAZ average would be 16.15.

The following content is provided to quantify VMT reductions for informational purposes only. This analysis has limitations because the VMT reductions are based on a TAZ with high-income, single-family households, where research has shown these characteristics of a TAZ equate to more frequent vehicle travel and trip lengths much longer than affordable housing that is targeted at a local workforce. This project is consistent with statewide and regional goals³ and research has shown affordable housing projects to overall reduce VMT.

Per the CAPCOA Handbook,⁴ 100 percent affordable housing may have a 28.6 percent reduction in VMT per resident compared with market-rate housing. Below market rate housing provides greater opportunity for lower income families to live closer to job centers and achieve a jobs/housing match near transit. It is also an important strategy to address the limited availability of affordable housing that might force residents to live far away from jobs or school, requiring longer commutes.

An agreement between the County Department of Housing and Moss Beach Associates, L.P. is for the development to set aside 52 of the 70 proposed units as Local Preference Units (about 74 percent of the units), where eligible households are those that include at least one member who lives or works in the City of Pacifica, the City of Half Moon Bay, and/or the unincorporated County region between the City of Pacifica and the City of Half Moon Bay (Greater Moss Beach Region). This requirement may result in shorter commute trips per resident, and thus reduce VMT. However, this type of TDM measure is not quantified in the CAPCOA Handbook and an adjustment factor has not been developed. Fehr & Peers estimated a reduction in VMT for Local Preference Units, and this reduction is shown in **Table 4**. **Table 4** also provides a list of potential

³ Refer to MTC Plan Bay Area 2050 and California Air Resources Board 2022 Scoping Plan Appendix D: Local Actions. Available: https://www.planbayarea.org/finalplan2050 and https://www2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf, respectively. Accessed January 3, 2023.

⁴ California Air Pollution Control Officers Associate. 2021. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity.* Available: https://www.caleemod.com/handbook/full-handbook.html. See pages 80-83. Accessed December 5, 2022.



VMT reductions associated with the Project's TDM Program, using the Caltrans TDM+ Tool⁵. The Project's TDM Program will encourage non-drive alone trips and result in reduced VMT, although implementation of the Program would not bring the Project's home-based VMT per resident below the threshold.

Table 2. VMT Reductions

			VMT Reduction							
Measure	Source	Subsector	Change in VMT	Description						
Scale: Project/Site ²	Scale: Project/Site ²									
Affordable and Below Market Rate Housing Project Description Land Us		Land Use	-28.6%	All the units are affordable housing, and therefore the maximum percent reduction is applied.						
Increased Density	Project Description	Land Use	N.A.	The Project is less dense than the average U.S. residential density and therefore no reduction is applied.						
Transit Subsidy or Discounted Transit Program	TDM Program	Trip Reduction Programs	-0.73%	The TDM Checklist includes M6 – Transit or Ridesharing Passes/Subsidies, which offers tenants passes or subsidized for monthly public transit or ridesharing costs incurred, equivalent to 30% of value or \$50, whichever is lower. The current monthly cost for a SamTrans Express Pass is \$130.1						
End-of-Trip Bicycle Facilities	TDM Program	Trip Reduction Programs	-0.55%	The TDM Checklist includes M8 – Secure Bicycle Storage. The Sponsor will comply with CalGREEN minimum bicycle parking requirements.						
Scale: Plan/Commi	unity ²									
Gap Closure and Sidewalk Improvements	TDM Program	Neighborhood Design	-2.73%	The TDM Checklist includes M23 – Gap Closure. As part of this measure, the Sponsor will add sidewalks and high visibility crosswalks as part of mitigation measure T-1 for Impact T-7. Using a study area of approximately 1,000 ft radius of Project site, the existing sidewalk length is about 0.1 miles and with the measure, the sidewalk length will be about 0.2 miles.						

Non-CAPCOA Measures

⁵ Caltrans. 2023. *SB 743 Implementation Resources*. Available: https://dot.ca.gov/programs/sustainability/sb-743/sb743-resources. Accessed January 3, 2023. TDM+ is a quick response, excel-based tool developed by Fehr & Peers to assist in calculating VMT reductions from the strategies presented in the 2021 CAPCOA Report Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Its interface is designed to allow the user to update the inputs for each measure based on the specific attributes of a project or plan, as well as to pre-populate certain default values based on the project location. This version of TDM+ is currently in beta-testing.



Local Preference Units ⁴	Project Description	N.A.		If 100% of residents in the local preference units live on the coast, apply a 0% reduction. If 100% of residents in the local preference units work on the coast, apply a 10.6% reduction.
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Total Reductions: 29.5%-37.0%³

Notes:

- 1. https://www.samtrans.com/fares/fare-types
- 2. The CAPCOA Handbook recommends that GHG reductions of transportation measures from different scales of application should not be combined. For this reason, the reduction in VMT is calculated for the Project/Site scale that includes a higher share of VMT reductions compared to the Plan/Community scale.
- 3. Total VMT reduction is calculated using this equation: Reduction = 1 [(1 A) * (1 B) * (1 C)] where A, B, and C represent the percent reduction in VMT for a specific TDM Measure. The Project results in a VMT reduction of 29.5%.
- 4. Local Preference Units are not noted in the CAPCOA Handbook as a quantified measure. If it were, we would expect it to be at the Project/Site scale and within the Land Use subsector. Applying this measure with a maximum reduction of 10% would result in a VMT reduction of 37.0%.

Source: Fehr & Peers, 2022.

The Gap Closure and Sidewalk Improvements measure is expected to reduce the community's VMT. Although these improvements would likely reduce Project-level VMT, when calculating Project-level VMT reductions, the CAPCOA Handbook does not recommend applying community benefits with project benefits as these benefits are at two different scales.

Applying the measures in Table 4 would result in a VMT reduction of 29.5-37.0 percent, which would reduce the Project's residential VMT per resident of 23.6 to 14.87-16.64, which is not below the VMT threshold for the Bay Area Regional Average (12.41) or the County Average (11.56). However, it does fall below the average for the Coastal TAZs (19.0) and would be close to 15 percent below the Coastal TAZ average (16.15). VMT reductions from the TDM would not meet thresholds. Ultimately, the CEQA impact determination will be based on the County's VMT Guidance. From the Interim VMT Guidance⁶, VMT thresholds for unincorporated areas of San Mateo County will be determined on a case-by-case basis.

Conclusion

This memorandum summarizes our remaining comments on the revised TIA (March 2023). For a summary of comments which have since been addressed, see **Attachment A**.

⁶ San Mateo County. Department of Public Works. "Change to Vehicle Miles Traveled as Metric to Determine Transportation Impacts under CEQA Analysis." (2020).



Attachment A: Addressed Comments from Draft TIA Peer Review

Table 1. Incorporated Peer Review Comments

F&P Comment

CEQA environmental impacts related to transportation shall be evaluated using the County's VMT threshold rather than the LOS standard. Update the Conclusions and Mitigations section of the TIA to clearly identify items that are CEQA impacts and corresponding mitigation measures, and items provided for informational purposes only. Include

VMT as a measure in the CEQA Significance Criteria.

The TIS Requirements are for the technical analysis to use standards and methodologies provided by the Analysis - Project Vehicle Trip Generation latest editions of ITE, HCM, and California Department of Transportation. The TIA was completed in 2022 and the latest edition of ITE is the 11th edition. Recommend updating trip generation using the ITE 11th edition rates for land use code 220.

The TIS Requirements related to trip generation state, "tabulate the estimated number of daily trips and AM and PM peak-hour trips generated by the proposed project entering and exiting the site". Add daily trip generation in the report to meet this requirement.

Kittelson TIA Incorporation

Data Analysis and Approach Section: Analysis split into CEQA Transportation Analysis (analysis section titled "Conclusions and Mitigation Measures") and Local Transportation Analysis (analysis section titled "Local Circulation and Traffic Operations"). Disclaimer added that the local LOS analysis is provided for informational purposes only.

Analysis Section: LOS tables for future and cumulative scenarios moved to the Local Circulation and Traffic Operations Section

Conclusions and Mitigation Measures: All LOS related impacts moved to Local Circulation and Traffic Operations Section. Changes in LOS are no longer categorized as formal impacts, instead described by intersection. Additionally, mitigation measures previously associated with LOS impacts are now categorized as "Improvement Measures" in Local Circulation and Traffic Operations Section

Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only.

Section: TIA maintains the ITE 9th Edition Trip Generation Calculations but includes new subsection "Trip Generation Sources" starting on page 24. This section includes the 11th Edition Trip Generation Table from F&P Peer Review for comparison and discusses justification for prevailing use of 9th Edition.

Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only.

Analysis – Project Vehicle Trip Generation **Section:** Daily trip generation is now incorporated in Table 2 on page 24.



The TIS Requirements state "trip generation factors and source are to be included in the report". Provide the seasonal adjustment rate and a discussion of analysis method to meet this requirement.

Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only.

Analysis – Existing Conditions Traffic Volumes Section: New subsection "Seasonal Adjustment Methodology" which describes the adjustment rate and methods (page 20).

Fehr & Peers collected traffic counts in October 2022 at the 10 locations identified in the TIA and compared the volumes to those collected in April 2017 for the traffic operations analysis. The TIA should include this comparison to acknowledge potential changes in volumes since the original counts were conducted.

Analysis – Existing Conditions Traffic Volumes Section: New subsection "Comparison with 2022 Volumes" describes the variation in volumes across the two data collection periods. The comparison ultimately determines that adjusted 2017 counts are appropriate (page 20).

Electric vehicle (EV) parking requirements are determined by the California Green Building Code¹, which was updated in 2022. The code requires 10 percent of spaces (15 total) be EV Capable, 25% be equipped with low power charging receptacles (36 total), and 5% be equipped with Level 2 EVSE (8 total). The quantity of EV spaces the Project is providing does not meet the CalGreen requirements, therefore Fehr & Peers recommends increasing the number of EV parking spacing to meet CalGreen requirements.

Site Access, Circulation, and Parking – Parking Assessment Section: New subsection "Electric Vehicle Parking" includes California Green Building Code parking requirements (page 31)

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¹ UpCodes. 2022. *California Green Building Standards Code 2022*. Available: https://up.codes/viewer/california/ca-green-code-2022/chapter/4/residential-mandatory-measures#4.106.4. Accessed December 5, 2022.



Table 2. Incorporated and Unincorporated Comments Regarding Impacts and Mitigations

Impact (Mitigation)	F&P Comment	Incorporated	Not Incorporated
T-1 (T-1, T-2) T-2 (T-1) T-3 (T-1)	Per SB 743, Level of Service is no longer a criteria under CEQA. Provide LOS for informational purposes and for consistency with local planning requirements only. Add additional discussion of plans underway as part of the Moss Beach State Route 1 Congestion & Safety Improvements Project.	Note: Now listed as "Intersection 7", "Intersection 1", and "Intersection 3" in "Local Circulation and Traffic Operations" Section Conclusions and Mitigation Measures: All LOS related impacts moved to Local Circulation and Traffic Operations Section. Changes in LOS are no longer categorized as formal impacts, instead described by intersection. Additionally, mitigation measures previously associated with LOS impacts are now categorized as "Improvement Measures"	Conclusions and Mitigation Measures: The "Improvement Measures" do not include discussion of the Moss Beach State Route 1 Congestion & Safety Project.
T-4 (T-1)	Per SB 743, Level of Service is no longer a criteria under CEQA. Provide LOS for informational purposes and for consistency with local planning requirements only. There are no plans being considered at this time for change in intersection control, geometry, or allowable turn movements.	Note: Now listed as "Intersection 6" in "Local Circulation and Traffic Operations" Section Conclusions and Mitigation Measures: All LOS related impacts moved to Local Circulation and Traffic Operations Section. Changes in LOS are no longer categorized as formal impacts, instead described by intersection. Additionally, mitigation measures previously associated with LOS impacts are now categorized as "Improvement Measures"	
T-5 <i>(T-1)</i>	Add additional discussion of plans underway as part of the Moss Beach State Route 1 Congestion & Safety Improvements Project. The TIS Requirements related to mitigation measures state, "The TIS must identify those mitigation measures which will be implemented by others. Those mitigation measures that are assumed to be implemented by others will be made a condition of approval for the project to be in place prior to issuance of building permits". The recommended improvement does not reach a conclusion on the mitigation or party(s) responsible for the mitigation. Need to identify solution and approach to implementation.	Note: Now listed as Impact T-1 Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only. Conclusions and Mitigation Measures: Mitigation Measure T-1 is now "Provide Additional TDM Measures" which lists supplemental infrastructure improvements to improve bicycle, pedestrian, and transit connectivity. The project sponsor is specified to be responsible for implementation. Additional Mitigation Measures include discussion about the Moss Beach State Route 1 Congestion & Safety Project, specifying Caltrans jurisdiction and that it is out of the exclusive control of the county. This sufficiently addresses the responsible party(s) for the mitigation.	



T-6 <i>(T-1)</i>	To reduce the impact to less than significant, the Project sponsor would need to coordinate with the City, Caltrans, and SamTrans on facilities to improve pedestrian safety. The sponsor may contribute a fair-share towards the following items to increase safety of pedestrians crossing State Route 1: • Construct sidewalk on Carlos Street from Project driveway to Highway 1. • Construct sidewalk on east side of Highway from Carlos Street to 14th Street for pedestrian path to SamTrans Route 117 northbound bus stop. • Construct crosswalk on Highway 1 to connect to the SamTrans southbound Route 117 stop at 16th Street • Provide bus stop amenities at SamTrans Route 117 northbound and southbound stops near Project site. We don't recommend the use of TDM as a mitigation measure for this impact. The TDM Plan should serve to encourage nondrive alone trips which would likely lead to an increase in pedestrians crossing State Route 1. Add additional discussion of plans underway as part of the Moss Beach State Route 1 Congestion & Safety Improvements Project.	Note: Now listed as Impact T-2 Conclusions and Mitigation Measures: Impact description now includes disclaimer about the potential for TDM to offset reduced trips overall with more people crossing SR 1 to access transit. TDM implementation is no longer used as a mitigation measure. Mitigation Measure T-1 is now "Provide Additional TDM Measures" which lists supplemental infrastructure improvements to improve bicycle, pedestrian, and transit connectivity. The project sponsor is specified to be responsible for implementation. Other Mitigation Measures include discussion about the Moss Beach State Route 1 Congestion & Safety Project, specifying Caltrans jurisdiction and that it is out of the exclusive control of the county. This sufficiently addresses the responsible party(s) for the mitigation. Additional suggested infrastructure measures to reduce the impact to less than significant were not incorporated. The impact remains.	
T-7 <i>(T-1)</i>	Need the Project sponsor to commit to the list of improvements identified under Mitigation Measure T-1 to reduce this impact. Consider contributions towards sidewalk or other pathway on east side of Highway 1 to bus stop at 14th St, crosswalk on Highway 1 to bus stop at 16 th Street, Class II bike lanes on SR 1, and transit stop improvements for the two bus stops identified. Coordinate with Caltrans, County, SamTrans, San Mateo County Transit District, and the Moss Beach State Route 1 Congestion & Safety Improvements Project team for aligning near term improvements with long term plans.	Note: Now listed as Impact T-3 Conclusions and Mitigation Measures: Mitigation Measure T-1 is now "Provide Additional TDM Measures" which lists supplemental infrastructure improvements to improve bicycle, pedestrian, and transit connectivity. The project sponsor is specified to be responsible for implementation. Additional suggested infrastructure measures to reduce the impact to less than significant were not incorporated. The impact remains.	



Table 3. Peer Review Comments Determined Unneceasing for TIA

F&P Comment	Kittelson TIA Incorporation
As identified in the TIA, a CEQA Significance Criteria is if the proposed project resulted in inadequate emergency access. The TIA does not include a measure of effectiveness related to emergency access. In addition to providing a measure(s) of effectiveness, add a discussion of the impact criteria in the Conclusions and Mitigations section. Refer to CEQA Guideline's Appendix G checklist. Items to add as measures of effectiveness include if the Project were to impair implementation of or physically interfere with adopted emergency response/evacuation plan, result in inadequate emergency access, and if project is in hazard areas, should analyze the project's effect on evacuation travel times. This may include residents, workers, students, and visitors (and possibly horses). Additionally, consider providing discussion of emergency routes for residents.	Per County direction, discussion regarding measure of effectiveness and impact criteria for emergency access will be included in the Environmental Impact Report. This item does not need to be addressed in the TIA.
In addition to traffic operations assessment using LCP Policies as part of the non CEQA assessment, identify and compare traffic operations to County thresholds as identified in the TIS Requirements.	Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only. Per County direction, the LCP is sufficient for evaluating operations and therefore did not wish to include the TIS Requirements.
TIS Requirements state "A table and a map showing the status, project/zone change/conditional use permit/parcel map/tract number, and the location of each project must be provided" for projects within a 2.5-mile radius that would be in place by the project's build out year. Recommend providing the table and map to meet this requirement.	Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only. This figure will be included in the Environmental Impact Report and does not need to be addressed in the TIA.
The TIS Requirements related to trip distribution state "Diagrams showing the percentages and volumes of the project and nearby project's AM and PM peak-hour trips logically distributed on the roadway system must be provided". The report provides the percentage trip distribution along Highway 1 for the project in a table (Table 4 in TIA) rather than in a diagram, and these percentages are not provided for nearby projects or local streets. Update report to meet this requirement.	Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only. Per County Direction, the diagrams would not provide additional value if included with existing intersection geometry diagrams, therefore they will not be included in the TIA.



The TIS Requirements related to the project description state "A complete description (including a map) of the existing land uses in the study area as well as their current zoning and use must be included." A map is not included in the TIA with the existing land uses and zoning. Update report to meet this requirement.

Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only.

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This map will be included in the Environmental Impact Report and does not need to be addressed in the TIA

The TIS Requirements state "Graphics should be included to illustrate the study area and vicinity, study intersections including photographs and lane diagrams for cross-reference, existing, background and future traffic volumes." The TIA does not include photographs of the study intersections. Update report to meet this requirement.

Note: The County TIS Requirements are not codified and should therefore be regarded as guidance only.

Per County Direction, these photos would not add value to the existing intersection diagrams and therefore do not need to be included in the TIA.

Add a construction traffic and parking assessment to the TIA. This assessment is often included in a TIA for CEQA purposes, particularly for projects that may be developed in phases where detailed construction information is not available for review. It is anticipated that a potential impact would be identified and a mitigation requiring submittal of a construction traffic management plan for each construction phase would be added.

Construction traffic and parking assessment will be included in the Environmental Impact Report. This item does not need to be addressed in the TIA.

Include a section that discusses the relevant plans and documents relating to the Project. Several county-wide and location specific planning documents specify goals and policies for the Cypress Point development and its surrounding area. Fehr & Peers reviewed these plans to evaluate the TIA's consistency with their outlined recommendations, included in **Appendix A.**

Discussion regarding relevant plans and documents as they pertain to the Project will be included in the Environmental Impact Report. This item does not need to be addressed in the TIA.

Appendix A: Relevant Plans & Policies

Relevant Plans and Policies

Local Coastal Program

The Local Coastal Program (LCP) primarily defaults to Connect the Coastside for transportation-related policies and project recommendations, as stated by Policy 2.53. The LCP requires that Midcoast developments evaluate impacts to Level of Service for coastal access and emergency vehicles and develop a Transportation Demand Management plan.

The plan also identifies the California Coastal trail, a continuous inter-connected public trail system along the coastline as a means of encouraging active transportation and fostering appreciation of the natural environment. The Coastal Trail is anticipated to cross Highway 1 at 16th Street, and further plans are identified in Connect the Coastside for creating a safe and continuous crossing.

Connect the Coastside

Connect the Coastside serves as the San Mateo County Midcoast Comprehensive Transportation Management Plan, as part of the Local Coastal Program policy¹. The most recent iteration of Connect the Coastside was finalized in July 2022.

The plan recommends nine projects which impact the street network surrounding the Project location, presented in **Table A-1**.

Table A-1. Connect the Coastside Project Recommendations

Project Name	Project No.	Description
Highway 1 Side Street Stop Signs	R2	Install stop signs and pavement markings at all side streets of SR-1 where missing
16th St/Highway 1 Intersection Control	R5	Intersection control, with preliminary recommendation of single-lane roundabout
California Ave/Highway 1 Intersection Control	R6	Intersection control, with preliminary recommendation of single-lane roundabout
Carlos Street Realignment to 16th Street	R9	Realign north terminus of Carlos Street at Highway 1 to connect to 16th Street
Carlos Street Traffic Calming	R10	Striping, signage, and completion of missing sidewalk, with conversion to one-way southbound with parking reoriented facing south on Carlos Street to accommodate the Parallel Trail and calm traffic in central Moss Beach

¹ https://www.smcgov.org/planning/local-coastal-program#

New and Improved Crossings of Highways 1 and 92	Pe1	Improve existing and add new pedestrian crossings on Highways 1 and 92 including marked crossings with flashing beacons, overcrossing of Highway 1/south of Carlos St, and improve Highway 1/Coronado
Highway 1 Multimodal Parallel Trail	Pe2	Connected walking and bicycling facilities along the east side of Highway 1 through connected Class I Path, sidewalks, and Class III Bike Route, with marked crossings of intersecting streets with the path
Highway 1 Bikeway	B1	Bikeway designation on Highway 1 of Class II Bike Lanes
Transit Stop Improvements	T1	Ensure all bus stops have ADA accessible pad, with additional amenities, at higher use stations including benches, shelters, and lighting

Moss Beach State Route 1 Congestion & Safety Improvements Project

San Mateo County has plans underway for improvements along State Route 1 (Cabrillo Highway) to improve congestion and safety for the corridor². The project is currently in the initiation stage, determining the feasibility of suggested improvements at the intersections of 16th Street, California Avenue, and Cypress Avenue with SR 1, in addition to the corridor through Moss Beach.

These locations are identified as part of the Connect the Coastside report. The project team is determining feasibility for a traffic signal and roundabout at these locations which would be anticipated for build out in cumulative conditions.

The County is working with Caltrans and the project is anticipated to be completed by 2030, although funding has not yet been identified. Although the project will not be completed for several years, it has the potential to address several transportation impacts that are identified by the TIA. The Project should consider interim mitigation measures in anticipation of the future implementation of corridor improvements.

SamTrans Bus Stop Improvement Plan

SamTrans is in the beginning stages of the development of the SamTrans Bus Stop Improvement Plan³. The project seeks to improve the accessibility and comfort of bus stops throughout their service district. However, the bus stops in closest proximity to the development, located at SR 1 and 16th Street, may not receive improvements due to space and access constraints. The Project should consider safety, accessibility, and comfort improvements to stops near the Project site.

Active Transportation Plan

The San Mateo County Active Transportation Plan⁴ identifies a vision of a connected network for bicyclists and pedestrians, with improved safety and complete streets. The plan presents a backbone network of

² https://www.smcgov.org/planning/moss-beach-sr-1

³ https://www.samtrans.com/Projects/bus-stop-improvement-plan

⁴ https://ccag.ca.gov/wp-content/uploads/2021/06/San-Mateo-County-Comprehensive-Bicycle-and-Pedestrian-Plan-Update-Final-Plan.pdf

bicycle facilities to connect the region, including a bicycle and pedestrian trail that runs north along State Route 1 adjacent to the Project location. There are currently no bicycle facilities in the area, and there are plans included in Connect the Coastside and the additional project recommendations with the Active Transportation Plan that seek to create a robust network of bicycle facilities along the corridors near Cypress Point. The plan identifies the following projects in Moss Beach:

- California Ave from Tierra Alta to lake Street, Class III
- Etheldore Street, Class III
- Vallemar Street, Class III
- Carlos St/Vermont Ave, Class III
- Highway 1 (16th Street to Etheldore), Class I

Appendix B: Additional Comments on the TIA Document

Fehr & Peers completed a detailed review of the TIA document and have provided additional items for consideration in **Table B-1**.

Table B-1. Additional Comments on the TIA Document

Item No.	Page No.	Comment
1	i	On the Contents page, the header has "List of Figures". Update the header in the initial section from page 5-10 for what is listed on the page. For example page 9 says "Appendices" and the page is the executive summary.
2	iii	Appendix 2 is listed as "Seasonal Turning Movement Counts Adjustment". The appendix includes an email with approval to use seasonal adjustments, but does not provide information about this adjustment. Consider providing this for disclosure of how traffic varies, and to document the analysis methodology.
3	1	Consider adding the approximate distance of the project driveway from Sierra Street.
4	1	Considering noting the second driveway location that is to be used as an emergency vehicle route.
5	1	The project impacts are identified on the executive summary. Consider including a description of all of the scenarios studied ahead of the project impacts section for more context. It would also be good to document what the "identified intersection operations standards" are, which are likely the LCP standards.
6	Figure 1	The map scale is not displaying properly. Please update.
7	Figure 1	Recommend showing the project site driveways on the map.
8	Figure 2	Label the streets in the tentative site plan. Confirm this is the most up to date site plan.
9	11	The most recent version of the Highway Capacity Manual (HCM) was released in January 2022. Recommend comparing operation methodologies from 2010 HCM to 2022 to ensure using most up to date guidance.
10	12	Update the policy number to Policy 2.43 in reference to LCP Desired Level of Service
11	13	Consider providing linear interpolation data for the growth between 2017 and 2040.
12	13	Reference #4 is provided in a different format to previous references. Recommend adding additional information to this source.
13	General	Check that references and footnotes are formatted consistently throughout the document
14	Figure 3	Consider adding project area boundary to the figure for more context.
15	17	Note that recently SamTrans renamed routes so routes with 2 digits represent school routes and routes with 3 digits are for general bus service. Route 17 has been renamed to Route 117. No action needed.

16	18	There are additional schools that Routes 117 and 18 serve. In addition to the two listed: Manual F. Cunha Intermediate School and Half Moon Bay High School, near the project site El Granada Elementary School, Wilkinson Elementary School, and Farallone View Elementary School can be served by these routes. Consider listing these in the section as well.
17	Figure 4	Recommend showing the project site driveways on the map.
18	20	Could specify that Appendix 3 detailed calculation worksheets are the Synchro reports.
19	Figure 5	Int #7 is missing an WBR movement
20	24	Reference #8 has a typo in the first clause. Suggest updating. I think it might be "The manual lists land use ITE XXX (XX) an average rate"
21	33	Provide information on which version of the Caltrans Highway Design Manual was used.
22	Figures 6, 7, 9- 12	Suggest changing the order of intersections so it runs 6 through 10 down the right side of the figure. Global comment for the figures displaying intersection movement information.
23	Figure 7	Is it assumed that there are not any project trips off SR 1? Please make it clear whether Project trip distribution was done just for trips on SR 1 or for all project trips.
24	41	Remove word "Page" from the page number for consistency with previous sections. This continues through section 4.

Appendix C: Traffic Counts Comparison

The following tables present a comparison of traffic counts collected in 2017 and 2022. Traffic counts are provided by intersection movement for each time period.

1. Highway 1 and 14th Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	1005	1342	1429
2017	1207	1480	1599
% Change	-17%	-9%	-11%

Peak Hour Turning Movements

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	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	0	534	7	2	441	0	0	0	0	17	0	4
2017 AM	0	637	15	1	532	0	1	0	0	14	0	7
% Change		-16%	-53%	100%	-17%		-100%			21%		-43%
2022 PM	0	633	25	2	669	0	0	0	0	10	0	3
2017 PM	0	630	18	5	809	1	0	0	1	11	0	5
% Change		0%	39%	-60%	-17%	-100%			-100%	-9%		-40%
2022 Weekend	0	556	12	2	845	0	0	0	0	9	0	5
2017 Weekend	2	698	8	4	871	2	1	0	1	9	0	3
% Change	-100%	-20%	50%	-50%	-3%	-100%	-100%		-100%	0%		67%

2. Highway 1 and 16th Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	1004	1341	1428
2017	1207	1463	1594
% Change	-17%	-8%	-10%

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	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	0	545	0	0	458	1	0	0	0	0	0	0
2017 AM	0	642	0	0	556	4	4	0	1	0	0	0
% Change		-15%			-18%	-75%	-100%		-100%			
2022 PM	3	650	1	2	677	2	1	1	2	2	0	0
2017 PM	0	641	0	1	805	4	5	0	4	1	0	2
% Change		1%		100%	-16%	-50%	-80%		-50%	100%		-100%
2022 Weekend	3	562	1	0	850	2	2	0	4	0	0	0
2017 Weekend	3	702	0	1	880	4	0	0	2	1	0	1
% Change	0%	-20%		-100%	-3%	-50%			100%	-100%		-100%

3. Highway 1 and Carlos Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	1002	1340	1428
2017	1191	1457	1579
% Change	-16%	-8%	-10%

	NIDL - ft	NIDTI	NIDD:l. 4	CDI - ft	CDTh	CDD:l. t	EDI - 6	EDTI	EDD:k.t	M/DL - ft	\A/DTl	M/DD:l-+
	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	0	522	1	7	450	0	0	0	0	0	0	22
2017 AM	0	617	0	5	546	0	0	0	0	0	0	23
% Change		-15%		40%	-18%							-4%
2022 PM	0	643	0	8	673	0	0	0	0	4	0	12
2017 PM	0	636	0	18	798	0	0	0	0	0	0	5
% Change		1%		-56%	-16%							140%
2022 Weekend	0	560	3	8	848	0	0	0	0	1	0	8
2017 Weekend	0	604	0	6	958	0	0	0	0	0	0	11
% Change		-7%		33%	-11%							-27%

4. Carlos Street and Sierra Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	44	35	28
2017	30	36	25
% Change	47%	-3%	12%

	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	0	1	6	8	1	0	0	0	0	7	0	21
2017 AM	0	1	0	5	1	0	0	0	0	1	0	22
% Change		0%		60%	0%					600%		-5%
2022 PM	0	1	7	9	0	0	0	0	0	4	0	14
2017 PM	0	1	6	19	0	0	0	0	0	4	0	6
% Change		0%	17%	-53%						0%		133%
2022 Weekend	0	3	4	10	1	0	0	0	0	2	0	8
2017 Weekend	0	2	2	4	2	0	0	0	0	2	0	13
% Change		50%	100%	150%	-50%					0%		-38%

5. Stetson Street and Sierra Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	42	36	25
2017	28	36	21
% Change	50%	0%	19%

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	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	21	0	0	0	0	0	0	7	6	0	8	0
2017 AM	18	0	0	0	0	0	1	2	3	0	4	0
% Change	17%						-100%	250%	100%		100%	
2022 PM	11	0	3	0	0	0	0	6	9	0	7	0
2017 PM	7	0	0	0	0	0	0	8	16	1	4	0
% Change	57%							-25%	-44%	-100%	75%	
2022 Weekend	8	0	0	0	0	0	0	7	7	1	2	0
2017 Weekend	13	0	1	0	0	0	0	2	4	1	0	0
% Change	-38%		-100%					250%	75%	0%		

6. Highway 1 and Vallemar Street/Etheldore Street

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	995	1347	1438
2017	1176	1465	1604
% Change	-15%	-8%	-10%

	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	8	478	9	11	432	3	4	0	10	4	0	36
2017 AM	4	592	4	10	530	0	3	0	5	2	0	26
% Change	100%	-19%	125%	10%	-18%		33%		100%	100%		38%
2022 PM	3	613	9	20	655	5	3	1	12	6	0	20
2017 PM	10	615	7	28	762	5	7	0	7	7	0	17
% Change	-70%	0%	29%	-29%	-14%	0%	-57%		71%	-14%		18%
2022 Weekend	6	538	6	18	824	9	5	1	6	6	1	18
2017 Weekend	9	678	2	19	854	5	0	0	7	5	2	23
% Change	-33%	-21%	200%	-5%	-4%	80%			-14%	20%	-50%	-22%

7. Highway 1 and California Avenue

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	1048	1430	1490
2017	1366	1501	1787
% Change	-23%	-5%	-17%

8. Carlos Street and California Avenue

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	93	150	121
2017	99	133	154
% Change	-6%	13%	-21%

	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	1	1	1	0	1	1	5	25	0	0	58	0
2017 AM	3	2	0	2	2	3	5	17	0	1	64	0
% Change	-67%	-50%		-100%	-50%	-67%	0%	47%		-100%	-9%	
2022 PM	4	8	10	1	6	9	15	43	13	4	37	0
2017 PM	6	7	4	2	8	8	21	35	4	2	32	4
% Change	-33%	14%	150%	-50%	-25%	13%	-29%	23%	225%	100%	16%	-100%
2022 Weekend	1	7	4	0	9	16	11	27	6	3	37	0
2017 Weekend	9	9	2	6	15	11	23	33	2	2	25	17
% Change	-89%	-22%	100%	-100%	-40%	45%	-52%	-18%	200%	50%	48%	-100%

9. Etheldore Street and California Avenue

Total Counts

	AM Peak	PM Peak	Sat Peak
2022	135	150	137
2017	113	128	145
% Change	19%	17%	-6%

	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	1	1	1	0	1	1	5	25	0	0	58	0
2017 AM	2	17	0	1	4	0	0	14	0	1	65	9
% Change	-50%	-94%		-100%	-75%			79%		-100%	-11%	-100%
2022 PM	8	8	7	11	13	1	0	41	4	14	37	6
2017 PM	4	5	7	15	10	2	0	41	3	9	30	2
% Change	100%	60%	0%	-27%	30%	-50%		0%	33%	56%	23%	200%
2022 Weekend	7	18	8	5	14	1	0	30	5	3	43	3
2017 Weekend	7	13	7	8	16	3	2	37	3	10	37	2
% Change	0%	38%	14%	-38%	-13%	-67%	-100%	-19%	67%	-70%	16%	50%

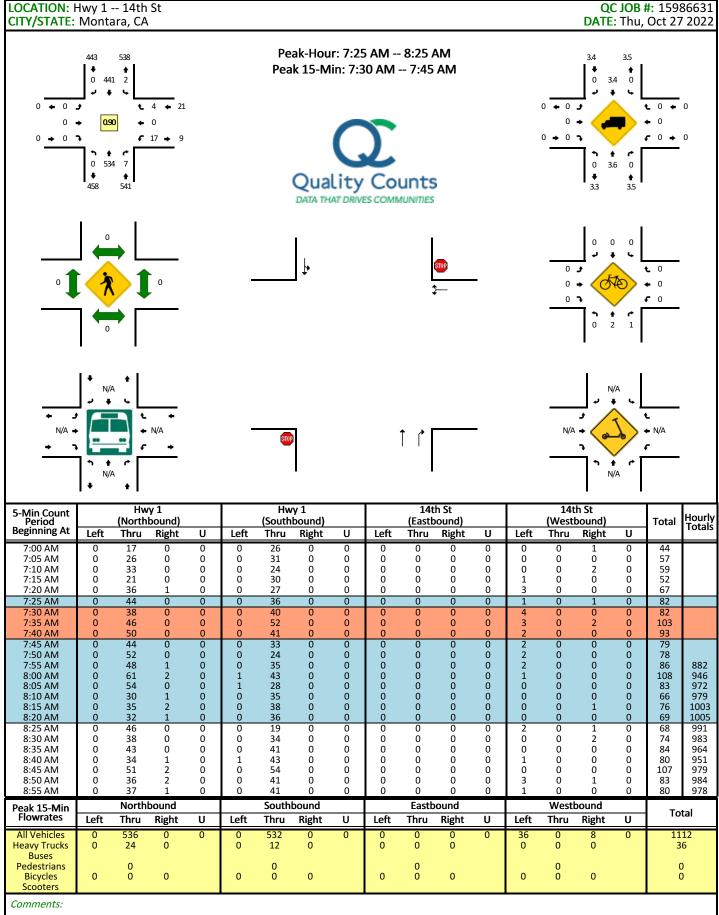
10. Stetson Street and California Avenue

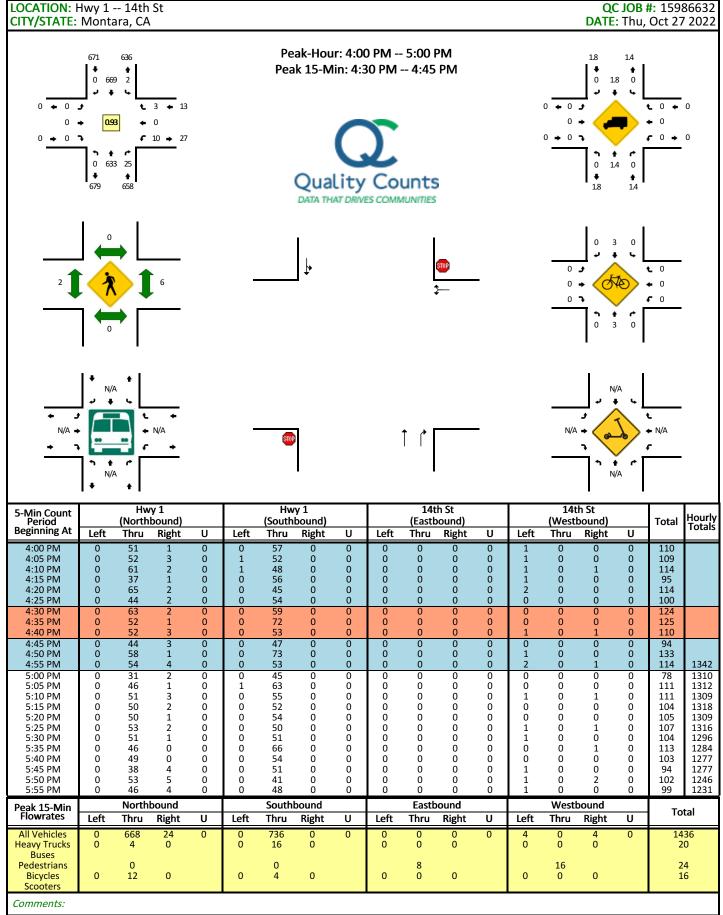
Total Counts

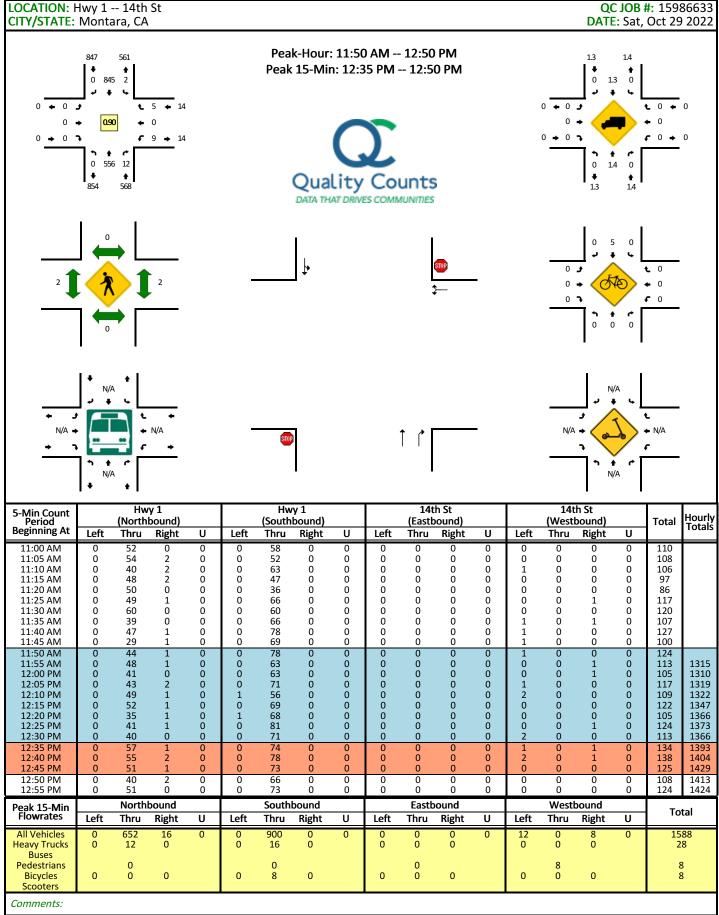
	AM Peak	PM Peak	Sat Peak
2022	109	123	100
2017	97	108	107
% Change	12%	14%	-7%

						and g						
	NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
2022 AM	0	4	2	0	0	6	7	25	1	2	62	0
2017 AM	1	1	2	0	0	6	0	17	1	5	63	1
% Change	-100%	300%	0%			0%		47%	0%	-60%	-2%	-100%
2022 PM	4	3	1	0	0	8	5	54	1	2	45	0
2017 PM	5	2	3	0	0	4	2	53	6	1	32	0
% Change	-20%	50%	-67%			100%	150%	2%	-83%	100%	41%	
2022 Weekend	1	0	3	0	1	4	3	36	2	1	49	0
2017 Weekend	4	1	3	0	1	5	4	44	3	2	40	0
% Change	-75%	-100%	0%		0%	-20%	-25%	-18%	-33%	-50%	23%	

Appendix D: Traffic Counts

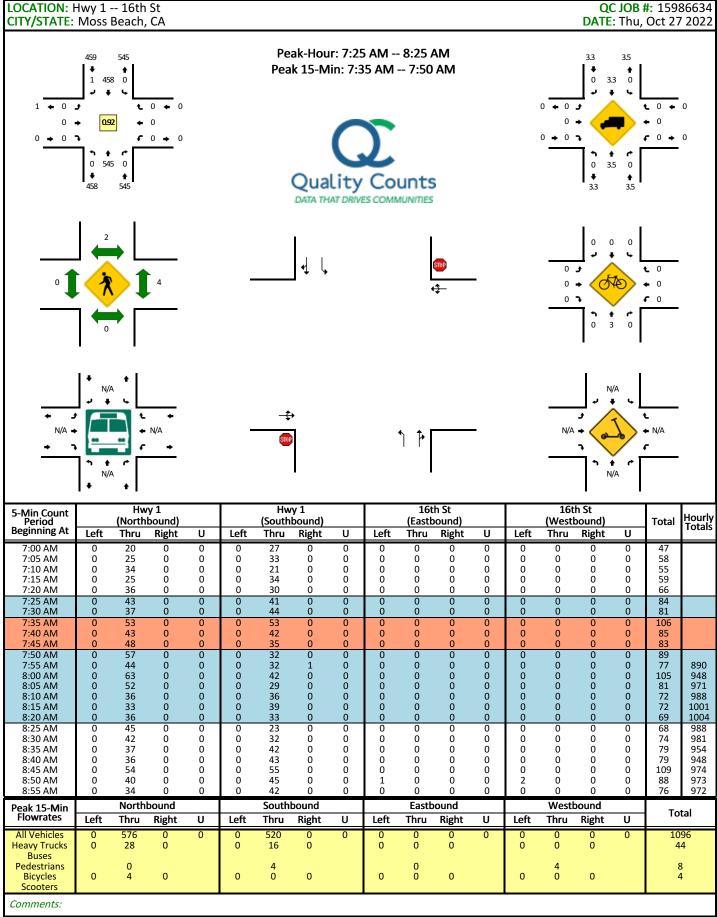






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